

curves M and N to provide a trifocal having desirable shape and automatic gravitational orientation characteristics.

In the modification, as shown in FIG. 12 of the drawings, the base curve *b*, formed on the radius L, is rearward relative to the interface junction, curve *a* formed on the radius M. As shown in FIG. 13, the convex anterior curved surface J' is formed on the radius J'' forwardly relative to the interface junction *a* in the central area of the lens where both materials H and S are disposed. In the outermost area K of the lens, only the low index of refraction material S is disposed. Accordingly, the distance seeing portion of the lens is in the area K and the bifocal portion of the lens is in the central area, the diameter of this central area of the lens may be such that distance seeing in the area K may be accomplished with facility.

It will be obvious to those skilled in the art that various modifications of the present invention may be resorted to in the manner limited only by a just interpretation of the following claims.

I claim:

1. A trifocal contact lens to be worn on the cornea of a human eye comprising: a lens body of circular configuration; said lens body being formed of first plastic material of a high index of refraction on the frontal portion thereof for far point vision and second plastic material of a low index of refraction fused on the rearward portion of said first material for near point vision and intermediate vision; said lens having an anterior convex surface and a posterior concave surface; a posterior portion of said first material having two generally

concave curvatures; the more central concave curve of said two concave curvatures related to intermediate vision and shorter in radius than a more peripheral concave curve of said two generally concave curvatures; said more peripheral concave curve being related to near point vision; and an anterior portion of said second material conforming with said posterior portion of said first material to form two interface junctions having radii of curvature ranging from 7.30 mm. to 14.00 mm., said posterior curved surface related to the cornea of the eye for proper fitting purposes, said two interface junctions being positioned with respect to said posterior curved surface, to insure the presence of an intermediate zone in the final lens, the radius of curvature of said posterior curved surface being shorter than that of said interface junctions and extending through the center of said interface junctions leaving a circular area of only high-index material near the center of the lens to provide the proper power for said far point or distance vision and leaving said high-index material in front of said low-index material toward the periphery of the lens so that said low-index material forms an annular area completely surrounding said far point area and the central portion of the lens, whereby the lens is thus symmetrical and concentric with respect to the central far point vision area and the surrounding intermediate and near point vision areas so that the lens may be rotated to various positions on the cornea of the eye without changing the optical cooperation with the eye in either the far point vision, intermediate vision or near point vision functions.

35

40

45

50

55

60

65

70

75